

ABSTRACT OF THE INVENTION

A power system specifically designed to provide reliable electrical power to a telecommunication facility is disclosed. In one embodiment, the system includes a number of proton exchange membranes adapted to convert a fuel, such as hydrogen, to DC electrical power, a number of rectifiers operable to convert AC electrical power received from an AC power source to DC power, and a number of capacitors operable to maintain power during the time required to change between power sources. Both the output of the rectifiers and the output of the proton exchange membranes are coupled to the capacitors. Initially, while the output of the proton exchange membrane rises to a predetermined level, power is supplied by the AC power source to the rectifiers and from the rectifiers to the capacitors and the telecommunications facility. Once it reaches the predetermined level, the output of the proton exchange membrane is supplied to the capacitors and the telecommunications facility and power is no longer received from the AC power source.